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# The New ACRE Program: Costs and Effects

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In 2010, many farmers will again choose between farm safety net programs offered by the U.S. government. They can remain in the more-familiar 2002 farm program, which protects against price declines and provides traditional direct payments. Or, they can enroll in the new Average Crop Revenue Election (ACRE) program, which protects against revenue shortfalls caused by falling prices or low yields. But ACRE requires farmers to give up a significant portion of their traditional 2002 farm program payments. Changing farm programs, especially ACRE, presents different costs and effects for not only farmers but taxpayers, too.

This article examines how enrollment in ACRE might affect future farm profitability, farmland values, and costs to the taxpayer. First, we compare ACRE with the programs of the 2002 Farm Bill and discuss the factors shaping last year's enrollment decision. Next, we examine how payments from the two programs influence farm profitability, farmland values, and taxpayer costs. ACRE should have a limited effect on some farmers, such as growers of cotton, peanuts, and rice, because the 2002 farm program provides larger government payments. But producers of crops such as corn, soybeans, and wheat could benefit because ACRE limits their downside revenue risk associated with low yields. While ACRE could lift farm profits and, in turn, underpin land values when yields are low, farm program costs are expected to remain flat.

## Comparing the 2002 and 2008 farm programs

The Food, Conservation and Energy Act of 2008, commonly known as the 2008 Farm Bill, allows farmers to choose between subsidy payment programs. Farmers may continue to receive payments under the 2002 Farm Bill—through the Direct Counter-Cyclical Payment (DCP) program.[1] Or, they may enroll in the new program outlined in the 2008 Farm Bill: ACRE.

Under DCP, farmers have been eligible for three types of government assistance—direct payments, counter-cyclical payments, and marketing assistance loan programs.

*Direct payments* are guaranteed payments based on a farmer's historical base acres and yields. These payments do not fluctuate with prices, as the payment rate was fixed by Congress in the 2002 Farm Bill. The payment rates vary by crop type, however, with cotton and rice producers receiving higher direct payments than corn, soybean, and wheat producers. For example, the 2009 direct payment for rice producers was just under $100 per acre and for corn producers was about $25 per acre.

*Counter-cyclical payments* are additional farm subsidies paid when the market commodity price falls

below specified levels. By design, these payments are meant to protect farmers from low prices. For some commodities, higher prices have reduced counter-cyclical payments. For example, the 2009 trigger prices were $2.35 per bushel of corn, $5.80 per bushel of soybeans, and $3.92 per bushel of wheat. But prices have been well above these levels since 2005. As a result, counter-cyclical payments fell from $4 billion in 2005 to about $700 million in 2007.

**Table 1**
**Primary Differences Between DCP and ACRE Programs in the 2008 Farm Bill**

| Direct Counter-Cyclical Payment Program | Average Crop Revenue Election Program |
|---|---|
| 100 Percent Direct Payments | 80 Percent Direct Payments |
| 100 Percent Marketing Assistance Loan Rate | 70 Percent Marketing Assistance Loan Rate |
| Receive Counter-Cyclical Payments | Receive ACRE Payments |
| Disaster Payments are Supplemental Revenue (SURE) Program | Disaster Payments are Supplemental Revenue (SURE) Program |

*Marketing assistance loans* are the final type of DCP payment. These loans offer farmers interim financing in the event that market prices fall below predetermined prices set by Congress. Farmers typically use these loans to meet cash flow needs when market prices are at a seasonal low during harvest. The loans allow them to store their crops and sell them after prices have rebounded from harvest lows. The farmers would then repay the loans with the proceeds from higher prices.

The 2008 Farm Bill, by contrast, offers farmers protection against revenue shortfalls for the whole farm operation, whether the shortfalls arise from low prices or low yields. The new SURE (Supplemental Revenue Assistance Payments) program makes payments in the event of a natural disaster. Previous farm bills required Congress to provide temporary disaster assistance. To receive such SURE payments, farmers must purchase crop insurance for all major crops produced each year.[2] In addition, SURE pays farmers at the end of each marketing year if total farm revenue falls more than 50 percent.

The ACRE program offers assistance on managing short-term revenue declines. Payments are triggered when farm revenues and state revenues fall below respective benchmarks. ACRE payments are based on the amount of crop planted, a two-year moving average commodity price, and a five-year Olympic average yield.[3] Thus, the payments are triggered by either low prices or low yields. By design, ACRE payments should improve a producer's ability to manage short-term drops in revenues, not just lower prices.

In exchange for the protection from falling yields, ACRE requires farmers to give up a portion of their assistance under DCP. Farmers lose 20 percent of their direct payments, give up 30 percent of their marketing assistance loan rates, and are no longer eligible for counter-cyclical payments (Table 1).

## Why was initial sign-up for ACRE so low?

Despite the added revenue protection that ACRE offers, few producers initially enrolled in the program in 2009. Their reluctance to forego much of their assistance from DCP was a primary reason farmers chose not to enroll. In addition, the new program is more complex than previous programs because enrollment requires farmers to project crop incomes over several years. And, once enrolled, farmers must stay in the program until 2012.

Farmers may enroll in ACRE in any of the 2009-12 crop years. Once enrolled, they must remain in the ACRE program for the remainder of the 2008 Farm Bill, which runs through 2012. Thus, farmers' decisions to enroll in the multiyear program required them to project future revenues. In other words, in 2009 farmers had to project their current year payment as well as forecast payments through 2012. Given the uncertainty of future ACRE payments, many farmers decided to stay in the more familiar DCP program.[4]

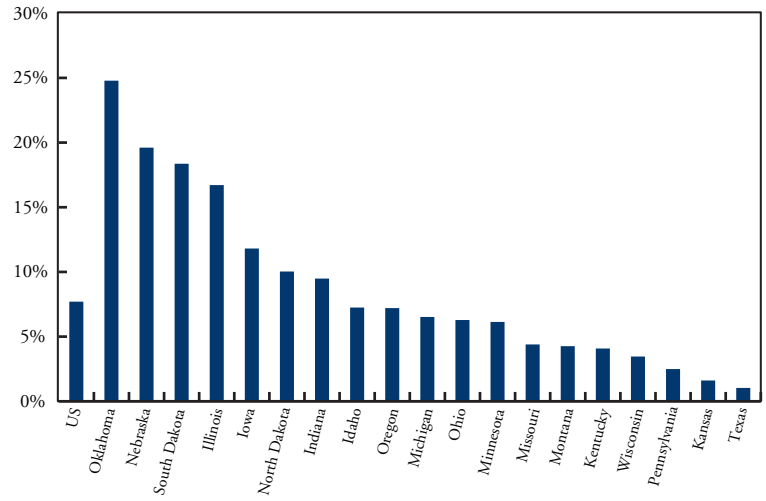
The requirement that farmers give up a portion of their guaranteed, direct payments also kept many farmers from enrolling in ACRE, especially those with large direct payments. Rice producers, for example, had a strong disincentive to enroll in ACRE in 2009 because doing so would have caused a loss in direct payments of $20 per acre. In contrast, the loss for corn producers would have been about $5 per acre.

Enrollment was similarly affected by a farmer's reliance on counter-cyclical payments. In recent years, prices for corn, soybeans, and wheat have been high, diminishing counter-cyclical payments for these crops. Thus, 2009 ACRE enrollment rates were higher for these producers than for cotton and peanut producers in states like Kentucky and Texas, where counter-cyclical payments are generally larger. Cotton farmers, in particular, would have lost as much as $100 per acre in counter-cyclical payments by enrolling in ACRE in 2009.

Wheat producers were more likely to enroll in ACRE during 2009 for a different reason: They had more information than other crop producers to make their decision. In contrast to crops like corn and beans, winter wheat is harvested during the summer. ACRE enrollment was held in August—at the end of wheat producers' marketing year. So, producers already knew their wheat yields and were more able to calculate their ACRE payments for the year. Wheat yields were well below average in 2009, especially in Oklahoma, offering producers a substantial ACRE payment. In many cases, the 2009 ACRE payment for winter wheat was over $40 per acre—more than four years of certain, direct payments.

In all, only 8 percent of U.S. farms enrolled in the ACRE program in 2009. Most enrollments took place in Oklahoma (25 percent of Oklahoma farms), Nebraska (just under 20 percent), and Illinois and South Dakota (both over 15 percent)—states that produce high concentrations of wheat, corn, and soybeans (Chart 1).

## Chart 1
## Percent of Farms Enrolled in ACRE by Selected States (2009)




Note: Selected states have more than 10,000 total farms.

## Implications of ACRE on farm profits, farmland values, and taxpayer costs

In 2010, many farmers will again decide whether to sign up for ACRE or remain under the 2002 Farm Bill programs—and this decision will face farmers each year until 2012. Their choices will likely vary with changing market conditions. ACRE enrollment is largely driven by its effect on future farm profitability, which varies by farm type and location. By design, ACRE should support revenues when either prices or yields fall and, in turn, may have a stabilizing effect on farmland values. While ACRE could drive taxpayer costs up, the total cost of farm subsidies under the 2008 Farm Bill are expected to be comparable with previous Farm Bill costs.

To assess the potential impact of ACRE payments on farm profitability, this analysis uses an ACRE decision tool, developed by the Agricultural & Food Policy Center at Texas A&M University.[5] The tool considers 500 different price and yield combinations from historical trends and uses commodity prices projected by the Food and Agricultural Policy Research Institute (FAPRI) to forecast ACRE and DCP payments.

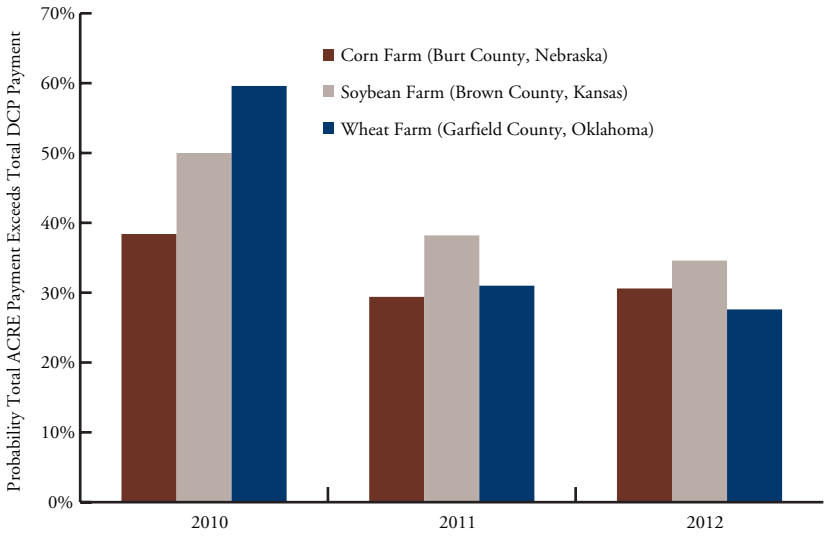
The decision tool is applied to a set of representative farms in the Federal Reserve's Tenth District. The analysis focuses on farm types most likely to receive an ACRE payment: a non-irrigated corn farm in Burt County, Nebraska; a non-irrigated soybean farm in Brown County, Kansas; and a wheat farm in Garfield County, Oklahoma. Each farm is assumed to produce 1,000 acres of its respective crop with a farm yield equal to the local county average yield.

*Farm profits.* The analysis shows that ACRE payments are more likely to support the profits of some farmers, most notably wheat producers, than of others. In 2010, according to the decision tool, ACRE payments should be higher than DCP payment for wheat producers 60 percent of the time, for soybean producers 50 percent of the time, and for corn producers 40 percent of the time (Chart 2).

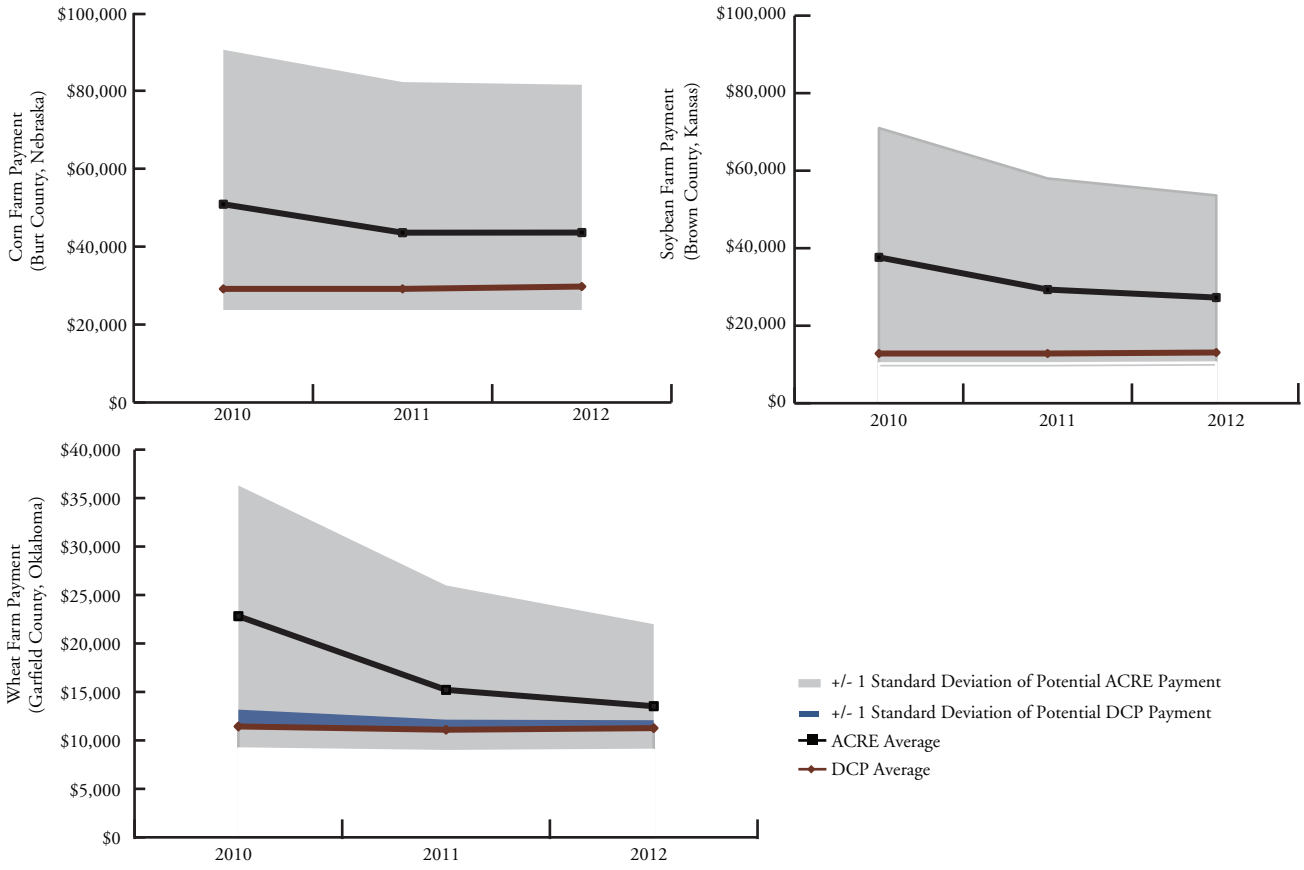
Moreover, when ACRE payments are larger, they are substantially larger (Chart 3). If revenues decline due to falling prices or low yields, the analysis shows that ACRE payments for corn, soybeans, and wheat could exceed DCP payments by up to $90, $70, and $35 per acre, respectively. On average, the 2010 projected ACRE payment for corn farmers is about $60 per acre, compared to roughly $20 per acre under DCP. Soybean and wheat farms should receive an average ACRE payment of $38 and $23 per acre, respectively, compared to about $10 per acre under DCP.

In general, the benefits of enrolling in ACRE are larger for producers in states with more variable yields. For example, Oklahoma wheat producers have greater yield variability

## Chart 2
## Probability ACRE will provide a higher payout than DCP to representative farms

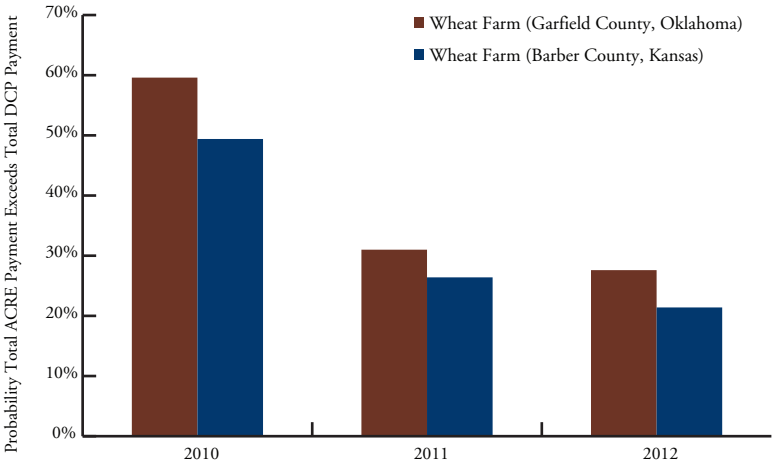



## Chart 3
## Comparing ACRE and DCP payments for Representative Farms



than nearby wheat producers in Kansas. In 2010, higher yield variability is partly why an Oklahoma wheat farm has a 60 percent chance of receiving higher ACRE payments than DCP payments, compared to a 50 percent chance for a Kansas wheat producer (Chart 4). These probabilities were also true in 2009 and help explain why the 2009 sign-up rate was higher in Oklahoma than in Kansas.

## Chart 4
### Probability ACRE will provide a higher payout than DCP to representative wheat farms




As the farm programs' ending date of 2012 approaches, the disparities between ACRE and DCP payments diminish. In 2012, the estimated average ACRE payment for corn and soybean farms exceeds the DCP payment by about $10 per acre, while for wheat the ACRE payment will exceed the DCP payment by only $2 per acre. Thus, the uncertainty of future prices and yields drives the estimated ACRE and DCP payments closer together.

*Farmland values.* The ACRE program may support corn, soybean, and wheat farmland values. Projected larger government payments under ACRE could underpin these cropland values. But support for these land values may be partially offset with lower direct payments.

ACRE payments should support farm profits and, in turn, underpin farmland values, especially for corn, soybean, and wheat farmers. The potential for larger ACRE payments, mostly under conditions of low yields, raises the average subsidy payment for farmers. Through 2012, on average, the ACRE total payment is projected to exceed the direct and counter-cyclical total payment for all representative corn, soybean, and wheat farms by more than 75 percent. These higher payments could then be capitalized into farmland values, which are the largest asset on farm balance sheets.[6]

While ACRE may provide support to cropland values, lower direct payments could partially offset this support. Research has shown that government payments, especially *direct* payments, are typically capitalized into farmland values.[7] For example, some estimates indicate the elimination of direct government payments would lower U.S. cropland values by an average of approximately 20 percent, with direct payments accounting for a larger portion of corn and soybean cropland values (30 percent) than of wheat cropland values (20 percent).[8] Based on these estimates and the fact ACRE lowers direct government payments by 20 percent, potential gains in wheat and corn/soybean land values could be offset by 4 and 6 percent, respectively.

*Taxpayer costs.* Clearly, ACRE has the potential to provide large payouts to farmers of crops such as corn, soybeans, and wheat. Unexpected increases in farm subsidies could put pressure on government budgets, which elevates concerns about rising taxpayer costs. While a significant increase in farm subsidies is possible, forecasters do not expect this to occur.

Shortly after the 2008 Farm Bill was approved, some observers warned that farm subsidy costs could skyrocket. In fact, subsidies could rise significantly in a year if prices and yields plunge and ACRE sign-up rates rise sharply. For example, in 2009 the representative Nebraska corn farm (Chart 3) would have received its maximum ACRE payment of $95.25 per acre if the average state yield had fallen below 100 bushels per acre and the national average price had fallen to $3.50 per bushel. If all U.S. corn farms had received their maximum ACRE payment, the payments could have totaled $10 billion.[9] Thus, the combination of these conditions could have raised expected total farm subsidies costs in 2009 from $12 billion to $28 billion.

While these large costs are possible, they are not expected. Compared to 2008, preliminary 2009 total farm

payments should increase by $600 million.[10] In 2010, the USDA is forecasting higher yields and low sign-up rates in ACRE, which are expected to lower total government payments by $500 million. And, FAPRI estimates 2011 and 2012 total government payments to remain flat around $12 billion.[11]

## Conclusions

The 2008 Farm Bill offers farmers the choice to remain in 2002 farm programs (DCP) or enroll in a new ACRE program that protects against revenue losses due to falling prices and low yields. For a variety of reasons, many farmers have until now decided to remain in DCP, but they will have additional opportunities to enroll in ACRE through 2012. By enrolling in ACRE, crop producers relinquish 20 percent of their certain direct payment for the *potential* of a larger, albeit uncertain, ACRE payment.

Enrollment in farm programs will almost certainly vary across the nation. It is doubtful that cotton, peanut, and rice farmers will enroll in ACRE because they would forego high direct and counter-cyclical payments provided under the DCP program. In contrast, corn, soybean, and wheat farmers are more likely to enroll in ACRE because current prices are well above target prices that would trigger counter-cyclical payments in the DCP program. Farmers located in states with more volatile yields, such as wheat farmers in Oklahoma, might be the most likely to enroll in ACRE.

The decision to enroll in either DCP or ACRE will affect farm profits, which, in turn, could reshape farmland values and the overall costs of farm programs. For those farmers remaining in DCP, the expected profit stream and capitalized farmland values have not changed. For farmers enrolling in ACRE, larger government payments would be expected when low prices or reduced yields cut farm revenues. Mitigating revenue shortfalls should underpin farmland values but could significantly raise taxpayer costs. While ACRE provides a different type of farm revenue support than traditional farm programs, its effect on total taxpayer costs is expected to remain flat.

## Endnotes

[1]More information on the DCP program is available on the Farm Service Agency's website: *http://www.fsa.usda.gov/Internet/FSA_File/dcp2008.pdf.*

[2]More information on SURE is available at *www.fsa.usda.gov/Internet/FSA_File/tx_sure_information.pdf.*

[3]More information on ACRE is available at *www.fsa.usda.gov/Internet/FSA_File/acre.pdf.*

[4]"Farm Programs: Confusion, concerns keep ACRE enrollment down," *The Land Online*, *www.thelandonline.com/l_programs/local_story_303123226.html*, accessed January 13, 2009.

[5]For consistency, the same ACRE decision tool is used for all farm types.

[6]Jason Henderson and Maria Akers, "Will High Farmland Values Hold?" The Main Street Economist, 2009.

[7]Barnard, C.H., G. Whittaker, D. Westenbarger, and M. Ahearn. "Evidence of Capitalization of Direct Government Payments into U.S. Cropland Values," *American Journal of Agricultural Economics*, 79(1997): 1642-50.

[8]Shoemaker, R., M. Anderson, and J. Hrubovcak. U.S. Farm Programs and Agricultural Resources. USDA, Agricultural Information Bulletin No. 1990, September 1990.

[9]Dan Morgan, "Farm Bill's Subsidy Costs May Rise," *The Washington Post*, Wednesday, May 21, 2008.

[10] "Farm Income and Costs: 2010 Farm Sector Income Forecast." United States Department of Agriculture, Economic Research Service, February 2010.

[11] Food and Agricultural Policy Research Institute, "FAPRI 2009 U.S. and World Agricultural Outlook." January 2009.